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NTE1675

Integrated Circuit

Dual AF Power Amp, 8.5W

Features:

- Small idling current (20mA/2 channels) enabling prolonged battery life.
- Small dependence of idling current on V_{CC} .
- High power (8.5W typ. X 2).
- High ripple rejection (60dB at steady state). Since filters are arranged in 3 stages (including 1 stage inside IC) to attain satisfactory ripple rejection at transient state, ripple occurring at the time of motor start can be prevented from missing in.
- Small pop noise at the time of power supply ON/OFF and good starting balance between both channels (0.6 sec) due to built-in pop noise limiter.
- Pins provided for compensating high frequency response.
- Small residual noise (0.4mV).
- Wide supply voltage range (6 to 24V) easing design of transformer power supply.
- Built-in thermal shutdown circuit.
- Designed so that inverse insertion or short between adjacent pins causes no destruction.
- Channel-to-channel mirror image pin assignment and provision of Pre GND, Power GND pins enabling stable operation and easing artwork of printed circuit board.
- Minimum number of external parts required (9 pcs. min, 12 pcs. typ)
- Audio muting capability (for automatic music selection, electronic tuner).

Absolute Maximum Ratings: ($T_A = +25^{\circ}\text{C}$ unless otherwise specified)

Maximum Supply Voltage, $V_{CC\text{max}}$	24V
Maximum Output Current, I_{opeak} 1 channel	2.5A
Allowable Power Dissipation, P_{dmax} With infinite heat sink	15W
Operating Temperature, T_{opg}	-20 to $+75^{\circ}\text{C}$
Storage Temperature, T_{stg}	-40 to $+150^{\circ}\text{C}$

Recommended Operating Conditions: ($T_A = +25^{\circ}\text{C}$ unless otherwise specified)

Recommended Supply Voltage, V_{CC}	15V
Load Resistance, R_L Stereo	3ohm

Electrical Characteristics ($T_A = 25^\circ\text{C}$, $V_{CC} = 15\text{V}$, $R_L = 30\Omega$ (Stereo), $f = 1\text{kHz}$, $R_g = 600\Omega$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	I_{CCO}	Stereo	10	20	30	mA
Voltage Gain	VG		48	50	52	dB
Voltage Gain Difference	ΔVG	Channels 1,2	–	–	± 1	dB
Output Power	P_O	THD = 10%	7.5	8.5	–	W
Total Harmonic Distortion	THD	$V_O = 2\text{V}$	–	0.3	1.5	%
Input Resistance	r_i		–	30	–	$k\Omega$
Output Noise Voltage	V_{NO}	$R_g = 0$, $f = 20\text{Hz}$ to 20kHz , Band-pass filter	–	0.4	1.0	mV
		$R_g = 10k\Omega$, $f = 20$ to 20kHz , Band-pass filter	–	0.6	2.0	mV
Ripple Rejection	R_r	$R_g=0$, $f_R = 100\text{Hz}$, $V_R = 0\text{dBm}$	50	60	–	dB
Channel Separation	ch sep	$R_g = 10k\Omega$, $V_O = 0\text{dBm}$	45	55	–	dB

Pin Connection Diagram

